

## REMARKS

Claims 16-18 and 24-27 are amended to consistently recite that the beam is defined. The Specification is amended at pages 16-17 to be consistent with the amendment of these claims.

Claim 24 is also amended to particularly point out that the portions of the given signal terminal received that are processed to derive the directional-position data associated with the given originator terminal are processed prior to detecting identification codes in the received signal.

This amendment of Claim 24 is supported by the disclosure of the Specification at page 17, lines 6-7.

Examined Claims 28-33 and unexamined Claims 41-47 are cancelled without prejudice.

Claims 1-27 and 34-40 remain in the application.

### ***Claim Rejections -35 USC §102***

The rejection of Claims 24-27 and 37 under 35 USC 102(b) as being anticipated by Young is respectfully traversed for at least the following reasons:

Regarding Claim 24, to the extent that the Examiner may consider this rejection to be applicable to amended Claim 24, amended Claim 24 is not anticipated by Young because in Young, the portions of the given signal terminal received that are processed to derive the directional-position data associated with the given originator terminal include identification codes and thereby are not processed prior to detecting identification codes in the received signal, as required by amended Claim 24.

Claim 25 is not anticipated by Young because Young neither discloses nor suggests:

- that directional-position data associated with the given originator terminal is derived from an acquisition segment of a burst of the received given communication signal, or
- that the beam path is immediately defined in accordance with the derived directional-position data to enable receipt of the remaining portions of said received signal burst within the defined beam path,

as further required by Claim 25.

Claim 26 is not anticipated by Young because Claim 26 depends from Claim 25, and because Young neither discloses nor suggests:

- transmitting an error-corrected version of the received signal burst back to the given originator terminal within the defined beam path,

as further required by Claim 26.

Claim 27 is not anticipated by Young because Young neither discloses nor suggests:

- that directional-position data associated with the given originator terminals is derived from acquisition segments of bursts of the respective communication signals, or
- that error-corrected versions of the received signal bursts are transmitted back to the given originator terminals within the defined beam paths,

as required by Claim 27.

Claim 37 is not anticipated by Young because Young neither discloses nor suggests:

- an individual user terminal that is adapted for simultaneously receiving both a given signal transmitted directly from another user terminal and said given signal relayed by a relay terminal,

as required by Claim 37.

It is not apparent from Young that any user terminal disclosed therein is adapted for receiving more than one signal at any given time. Also, Young does not disclose or suggest that any given signal directly received by a user terminal from another user terminal is also simultaneously received by the user terminal from a relay terminal.

The rejection of Claims 34-36 under 35 USC 102(b) as being anticipated by Sauvageot is respectfully traversed for at least the following reasons:

Claim 34 is not anticipated by Sauvageot because Sauvageot neither discloses nor suggests:

- applying frequency-hopping patterns to received communication signals for relay of the communications signals,
- storing algorithms and parameters for executing a plurality of frequency-hopping patterns, or
- selecting algorithms and parameters that cause different frequency-hopping patterns to be applied for each simultaneous receipt and relay of the communication signals,

as required by Claim 34.

Although Sauvageot discloses “beam hopping”, beam hopping is not equivalent to frequency hopping.

Claim 35 is not anticipated by Sauvageot because Claim 35 depends from Claim 34 and because Sauvageot neither discloses nor suggests:

- causing respectively different said frequency-hopping patterns to be applied to acquisition, identification and payload segments of relayed communication signals,

as required by Claim 35.

Claim 36 is not anticipated by Sauvageot because Sauvageot neither discloses nor suggests

- applying frequency-hopping patterns to received communication signals for relay of the communication signals, or
  - applying respectively different said frequency-hopping patterns to acquisition, identification and payload segments of relayed communication signals,
- as required by Claim 36.

Although Sauvageot discloses “beam hopping”, beam hopping is not equivalent to frequency hopping.

### ***Claim Rejections -35 USC §103***

The rejection of Claims 1-3, 5-9, 15-21 and 38-40 under 35 USC 103(a) as being unpatentable over Young in view of Bi and further in view of Redden is respectfully traversed for at least the following reasons:

Claim 1 is patentable over the cited combination of references because said references neither disclose nor suggest:

- that the received communication signals be relayed immediately to only those of the identified destination terminals to which immediate relaying is authorized in accordance with a determination made by processing identification codes detected in received communication signals in combination with stored relay-authorization-and-priority data for a plurality of user terminals having respective identification codes,
- as required by Claim 1.

“Immediate” is defined by Dictionary.com Unabridged (v. 1.1) as “**1. occurring or accomplished without delay; instant: *an immediate reply.* 2. following or preceding without a lapse of time: *the immediate future.* ...”**

It is pointed out in the first paragraph on page 5 of the Specification that the present invention provides a signal structure and processing techniques that immediately provide resources for fulfilling service requests that satisfy certain authorization and priority criteria by effecting immediate sharing of relay processing and antenna sources.

The Examiner's position as stated at page 7, lines 7-9 of the Office Action with reference to Redden "that users with class identifier "1" will have access to the satellite "immediately", whereas users with a lower priority class identifier will have to wait or retry another time" is inapposite to the invention of Claim 1, because Claim 1 is directed to determining whether immediate relaying of a communication signal is authorized, instead determining access to a relay terminal in accordance with priority data that merely specifies a relative priority among users.

The relay terminal of the present invention processes both authorization data and priority data. Whether or not immediate relaying is authorized is determined by processing stored authorization data with identification codes detected in communication signals received by the relay terminal. The priority data is used to redetermine whether immediate relaying is authorized when there is congestion of received communication signals for which immediate relaying is authorized, in which event preemption occurs in accordance with the priority data, as explained at page 13, line 24 to page 14, line 18 of the Specification.

Claim 3 is patentable over the cited combination of references because Claim 3 ultimately depends from Claim 1 and also because said references neither disclose nor suggest:

- that the processing means be adapted for redetermining an immediate-relay authorization in accordance with updated stored relay-authorization-and-priority data and for preempting at least some previously authorized signal relaying in accordance with said redetermination,
- as further required by Claim 3.

Examples of criteria that are used to determine whether or not immediate relaying is authorized include (a) geographic position data for the relay terminal and identified destination terminals, as recited in dependent Claim 4 and independent Claim 22, and (b) time-of-day data, as recited in dependent Claims 5 and 23. The subject matter of these claims is discussed at page 10, line 22 to page 11, line 9.

Claim 4 is discussed below in relation to a rejection thereof in a separate portion of the Office Action.

Independent Claim 22 is patentable over the cited combination of references because said references neither disclose nor suggest:

- that the received communication signals be relayed immediately to only those of the identified destination terminals to which immediate relaying is authorized in accordance with a determination made by processing identification codes detected in received communication signals in combination with stored relay-authorization-and-priority data for a plurality of user terminals having respective identification codes; or
- that detected identification codes and stored data in combination are processed with geographical-position data for the relay terminal and the identified destination terminals to determine whether immediate relaying of the received communication signal to the respective identified destination terminals is authorized in accordance with the relative positions of the relay terminal and the identified destination terminals,

as required by Claim 22.

Claims 5 is patentable over the cited combination of references because Claim 5 depends from Claim 4 and ultimately depends from Claim 1 and also because said references neither disclose nor suggest:

- processing detected identification codes and stored data in combination with time-of-day data to determine whether immediate relaying of said received

communication signals to respective said identified destination terminals is authorized in accordance with the time of day,  
as further required by Claim 5.

Claim 23 is patentable over the cited combination of references because Claim 23 depends from Claim 22 and also because said references neither disclose nor suggest:

- processing detected identification codes and stored data in combination with time-of-day data to determine whether immediate relaying of said received communication signals to respective said identified destination terminals is authorized in accordance with the time of day,

as further required by Claim 23.

Claim 16 is directed to sustaining of relayed communications involving user terminals that are moving and thereby changing their positions in relation to the relay terminal. Such sustainability is enhanced by processing deriving directional-position data associated with a given originator terminal within an acquisition segment of a burst of a communication signal received from a given originator terminal; and immediately defining a beam path in accordance with said derived directional-position data to enable receipt of the remaining portion of said received signal burst within the formed beam path, as recited in Claim 16.

Claim 16 is patentable over the cited combination of references because Claim 16 depends from Claim 1 and also because said references neither disclose nor suggest:

- that directional-position data associated with the given originator terminal is derived from an acquisition segment of a burst of the received given communication signal, or
- that the beam path is immediately defined in accordance with the derived directional-position data to enable receipt of the remaining portions of said received signal burst within the defined beam path,

as further required by Claim 16.

Claim 17 is patentable over the cited combination of references because Claim 17 depends from Claim 16 and ultimately depends from Claim 1 and also because said references neither disclose nor suggest:

- transmitting an error-corrected version of the received signal burst back to the given originator terminal within the defined beam path,
- as further required by Claim 17.

Claim 18 is patentable over the cited combination of references because Claim 18 depends from Claim 1 and also because said references neither disclose nor suggest:

- that directional-position data associated with the given originator terminals is derived from acquisition segments of bursts of the respective communication signals, or
  - transmitting error-corrected versions of the received signal bursts back to the originator terminals within the defined beam paths,
- as further required by Claim 18.

Claims 2, 6-9, 15 and 19-21 are also patentable over the cited combination of references because each said claim depends either directly or ultimately from Claim 1, which is discussed above.

Claims 38-40 are directed to user terminals rather than relay terminals.

Claim 38 is patentable over the cited combination of references because said references neither disclose nor suggest

- a user terminal that includes a plurality of receivers for simultaneously receiving communication signals from respectively different sources, or
  - a user terminal that includes a router for routing the received communication signals to at least one output device in accordance with a predetermined priority,
- as required by Claim 38.



Claim 39 is patentable over the cited combination of references because Claim 39 depends from Claim 38 and also because said references neither disclose nor suggest:

- a user terminal in which a plurality of receivers are respectively adapted for receiving at least two different communication signals among one or more network-specific signals, common information signals, alert signals and paging signals, or
- a user terminal in which a predetermined priority for routing received communication signals to at least one output device is established among one or more network-specific signals, common information signals, alert signals and paging signals,

as further required by Claim 39.

Claim 40 is patentable over the cited combination of references because Claim 40 depends from Claim 38 and also because said references neither disclose nor suggest:

- a user terminal having one receiver that is adapted for receiving a given signal transmitted directly from another user terminal and another receiver that is adapted for receiving the given signal relayed by a relay terminal,

as required by Claim 40.

The rejection of Claims 10-14 under 35 USC 103(a) as being unpatentable over Young in view of Bi and further in view of Redden and further in view of Sauvageot is respectfully traversed for at least the following reasons:

Claims 10 and 11 are patentable over the cited combination of references because Claims 10 and 11 depend either ultimately or directly from Claim 1 and also because said references neither disclose nor suggest:

- applying frequency-hopping patterns to received communication signals for relay of the communication signals,
- storing algorithms and parameters for executing a plurality of frequency-hopping patterns, or
- selecting algorithms and parameters that cause different frequency-hopping

patterns to be applied for each simultaneous receipt and relay of the communication signals,  
as further required by Claims 10 and 11.

Although Sauvageot discloses “beam hopping”, beam hopping is not equivalent to frequency hopping.

Claim 12 is patentable over the cited combination of references because Claim 12 depends from Claim 10 and ultimately depends from Claim 1 and also because said references neither disclose nor suggest:

- selecting means that are adapted for causing different said frequency-hopping patterns to be applied to acquisition, identification and payload segments of relayed communication signals,  
as required by amended Claim 12.

Claim 13 is patentable over the cited combination of references because Claim 13 ultimately depends from Claim 1 and also because said references neither disclose nor suggest

- causing different said frequency-hopping patterns to be applied to acquisition, identification and payload segments of relayed communication signals, as required by Claim 13.

Claim 14 is patentable over the cited combination of references because Claim 14 ultimately depends from Claim 1 and also because said references neither disclose nor suggest:

- applying a different frequency-hopping pattern to each of a plurality of simultaneously relayed communication signals, as required by Claim 14.

Claims 12, 13 and 14 are also patentable over the cited combination of references because each depends from amended Claim 1, which is discussed above.

The rejection of Claim 4 under 35 USC 103(a) as being unpatentable over Young in view of Bi and further in view of Redden and further view of Wang is respectfully traversed for at least the following reasons:

Claim 4 is patentable over the cited combination of references because Claim 4 ultimately depends from Claim 1 and also because said references neither disclose nor suggest:

- processing detected identification codes and stored data in combination with geographical-position data for the relay terminal and the identified destination terminals to determine whether immediate relaying of the received communication signal to the respective identified destination terminals is authorized in accordance with the relative positions of the relay terminal and the identified destination terminals,

as further required by Claim 4.

Wang is no more concerned with determining whether immediate relaying of a communication signal is authorized than are Young, Bi or Redden. Please see the above discussion supporting the traversal of the rejection of Claim 1.

In addition, the sequence of message processing in response to a request for a ring-alert or page prior to issuing the ring-alert or page, as described by Wang at column 10, lines 25-49 precludes immediate relaying of a communication signal.

## ***Conclusion***

Should the Examiner once again reject any of the claims for the same reasons as set forth in the Office Action, he is respectfully requested to explain why the portions of the respective references cited by the Examiner, or any other portions of such references, disclose the features of the again-rejected claims that applicant has pointed out above as not being disclosed or suggested by the respective references.

Applicant does not necessarily agree with any of the Examiner's comments regarding the applicability of the cited references to any of the claims. However, in view of the reasons presented herein for traversing the rejections of the claims, applicant is not presenting additional arguments at this time. Applicant reserves the right to present additional arguments for traversing the present and any future rejections of the claims.

Entry of this amendment and reconsideration and allowance of Claims 1-27 and 34-40 are respectfully requested.

Respectfully submitted,

Dated November 3, 2008



Edward W. Callan

Attorney Registration No. 24,720

Attorney for Applicant

Customer No. 22653  
Telephone: (858) 259-5533  
Email: [ecallan1@san.rr.com](mailto:ecallan1@san.rr.com)